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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,680	11/19/2003	Henry J. McGinnis	0738JB.044311	6590

7590 05/04/2005

Attention: James E. Bradley
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EXAMINER

DAVIS, OCTAVIA L

ART UNIT PAPER NUMBER

2855

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,680

Applicant(s)

MCGINNIS ET AL.

Examiner

Octavia Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 23 – 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Breecher et al.

Regarding claim 23, Breecher et al disclose a method for dynamically determining the horizontal motion and twist of a microwave tower comprising an elongated structure having a base 11 and a top, at least one laser device 24 disposed at a first location on the structure, at least one target 22, 23 disposed at a second location on the structure for receiving a laser beam 46 from the laser device and a detection device 41 that monitors the target to determine any change in position of where the laser beam strikes the at least one target, thereby indicating deflection of the tower (See Cols. 2 and 3, lines 31 – 68 and 1 – 36).

Regarding claim 24, a tube 12 extends from the laser device 24 to the target 22 (See Fig. 1).

Regarding claim 25, the detection device comprises a camera 38 mounted adjacent to the target such that a line extending from a lens of the camera to the target is at an inclination relative to the laser beams (See Col. 2, lines 57 – 65).

Regarding claim 26, the target comprises a pixel grid (See Col. 2, lines 48 – 54).

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breecher et al in view of Gabriel et al.

Regarding claims 1, 2, 5, 9, 10, 14, 16 - 18 and 21, Breecher et al disclose all of the limitations of these claims except for emitting at least two parallel laser beams from the laser device and striking the target at reference locations that indicate a reference position for the upright structure, monitoring any change in position of the points where the laser beams strike the target and calculating any differences between the points and the reference locations to determine any lateral deflection and twisting rotation of the structure relative to the reference position from the first to the second location and analyzing the differences with a computer wherein the reference position of the tower is substantially zero deflection and zero twist rotation. However, Gabriel et al disclose a system for monitoring movements of a structure comprising a plurality of lasers 230 which are focused at respective a point 226A, B and which emit a plurality of beams at a target 220 (See Cols. 5 and 6, lines 29 – 41 and 4 – 28), means for monitoring any change in position of the points where the beams strike the target (See Col. 6, lines 62 – 68), means for calculating a difference between the points (See Col. 7, lines 1 – 26) and analyzing the differences with an analyzing means 266 (See Col. 6, lines 36 – 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breecher et al according to the teachings of Gabriel et al for the

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purposes of, providing a means for clearly distinguishing the direction of movement of the target to ensure that a respective laser beam is setup at an edge bounding an unbarred portion (See Gabriel et al, Col. 6, lines 29 – 36) and obtaining measurements to plot the deflection as the beam impinges on different fiber optic ends in the target (See Gabriel et al, Col. 6, lines 54 – 61).

Regarding claim 3 and 19, in Breecher et al, the upright structure is a tower (See Col. 2, lines 38 – 40).

Regarding claims 4, 8, 12, 13 and 23, in Breecher et al, the laser device 24 is disposed at or near a base 11 of the structure and the target 22, 23 are disposed at or near a top of the structure (See Fig. 1).

Regarding claims 6, 15 and 22, in Breecher et al, the target comprises a pixel grid (See Col. 2, lines 48 – 54).

Regarding claims 7, 11 and 20, in Breecher et al, a tube 12 is mounted between the laser device and the target (See Fig. 1).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jackson et al (6,055,391) teach a system for detecting and damping vibrations in printer components.

Lee et al (5,790,327) disclose an apparatus and method for fabricating a deflection mirror tower.

Canty (5,850,185) discloses a deflection monitoring system.

Chovan (6,556,288) discloses a distributed displacement sensor.

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6. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 - 9306.



OD/2855

4/27/05



MAX NOORI
PRIMARY EXAMINER